

SEQUENCE LISTING

<110> BIOVECTOR THERAPEUTICS
INSERM

5

<120> POLYEPITOPIC PROTEIN FRAGMENTS OF THE E6 PROTEIN
OR E7 OF HPV, THEIR PRODUCTION AND THEIR USE
PARTICULARLY IN VACCINATION

10 <130> WOB EPIT 2

<140>
<141>

15 <150> FR 9907012
<151> 1999-06-03

<160> 18

20 <170> PatentIn Ver. 2.1

<210> 1
<211> 477
<212> ADN

25 <213> Human Papillomavirus

<220>
<221> CDS
<222> (1)..(477)

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atg cac caa aag aga act gca atg ttt cag gac cca cag gag cga ccc 48
Met His Gln Lys Arg Thr Ala Met Phe Gln Asp Pro Gln Glu Arg Pro
1 5 10 15

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aga aag tta cca cag tta tgc aca gag ctg caa aca act ata cat gat 96
Arg Lys Leu Pro Gln Leu Cys Thr Glu Leu Gln Thr Thr Ile His Asp
20 25 30

40

ata ata tta gaa tgt gtg tac tgc aag caa cag tta ctg cga cgt gag 144
Ile Ile Leu Glu Cys Val Tyr Cys Lys Gln Gln Leu Leu Arg Arg Glu
35 40 45

45

gta tat gac ttt gct ttt cgg gat tta tgc ata gta tat aga gat ggg 192
Val Tyr Asp Phe Ala Phe Arg Asp Leu Cys Ile Val Tyr Arg Asp Gly
50 55 60

50

aat cca tat gct gta tgt gat aaa tgt tta aag ttt tat tct aaa att 240
Asn Pro Tyr Ala Val Cys Asp Lys Cys Leu Lys Phe Tyr Ser Lys Ile
65 70 75 80

55

agt gag tat aga cat tat tgt tat agt ttg tat gga aca aca tta gaa 288
Ser Glu Tyr Arg His Tyr Cys Tyr Ser Leu Tyr Gly Thr Thr Leu Glu
85 90 95

cag caa tac aac aaa ccg ttg tgt gat ttg tta att agg tgt att aac 336
Gln Gln Tyr Asn Lys Pro Leu Cys Asp Leu Leu Ile Arg Cys Ile Asn
100 105 110

tgt caa aag cca ctg tgt cct gaa gaa aag caa aga cat ctg gac aaa 384
 Cys Gln Lys Pro Leu Cys Pro Glu Glu Lys Gln Arg His Leu Asp Lys
 115 120 125

5

aag caa aga ttc cat aat ata agg ggt cgg tgg acc ggt cga tgt atg 432
 Lys Gln Arg Phe His Asn Ile Arg Gly Arg Trp Thr Gly Arg Cys Met
 130 135 140

10

tct tgt tgc aga tca tca aga aca cgt aga gaa acc cag ctg tga 477
 Ser Cys Cys Arg Ser Ser Arg Thr Arg Arg Glu Thr Gln Leu
 145 150 155

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<210> 2
 <211> 158
 <212> PRT
 <213> Human Papillomavirus

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Arg Lys Leu Pro Gln Leu Cys Thr Glu Leu Gln Thr Thr Ile His Asp
 20 25 30

Ile Ile Leu Glu Cys Val Tyr Cys Lys Gln Gln Leu Leu Arg Arg Glu
 35 40 45

30

Val Tyr Asp Phe Ala Phe Arg Asp Leu Cys Ile Val Tyr Arg Asp Gly
 50 55 60

Asn Pro Tyr Ala Val Cys Asp Lys Cys Leu Lys Phe Tyr Ser Lys Ile
 65 70 75 80

35

Ser Glu Tyr Arg His Tyr Cys Tyr Ser Leu Tyr Gly Thr Thr Leu Glu
 85 90 95

40

Gln Gln Tyr Asn Lys Pro Leu Cys Asp Leu Leu Ile Arg Cys Ile Asn
 100 105 110

Cys Gln Lys Pro Leu Cys Pro Glu Glu Lys Gln Arg His Leu Asp Lys
 115 120 125

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Lys Gln Arg Phe His Asn Ile Arg Gly Arg Trp Thr Gly Arg Cys Met
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Ser Cys Cys Arg Ser Ser Arg Thr Arg Arg Glu Thr Gln Leu
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<210> 3
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<220>
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of the sequence coding for E6 of HPV and corresponding
peptide sequence

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    Arg Pro Arg Lys Leu Pro Gln Leu Cys Thr Glu Leu Gln Thr Thr Ile
      1             5             10             15

    cat gat ata ata tta gaa tgt gtg tac tgc aag caa cag tta 90
    His Asp Ile Ile Leu Glu Cys Val Tyr Cys Lys Gln Gln Leu
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      20             25             30

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    aga gat ggg aat cca tat 66
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of the sequence coding for E6 of HPV and corresponding
peptide sequence

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Arg Asp Gly Asn Pro Tyr
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<210> 7

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<222> (1)..(87)

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att agt gag tat aga cat tat tgt tat agt ttg tat gga aca aca tta 48
Ile Ser Glu Tyr Arg His Tyr Cys Tyr Ser Leu Tyr Gly Thr Thr Leu
1 5 10 15

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gaa cag caa tac aac aaa ccg ttg tgt gat ttg tta att 87
Glu Gln Gln Tyr Asn Lys Pro Leu Cys Asp Leu Leu Ile
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<210> 8

<211> 29

<212> PRT

<213> Artificial sequence

45 <223> Description of the artificial sequence: fragment
of the sequence coding for E6 of HPV and corresponding
peptide sequence

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Glu Gln Gln Tyr Asn Lys Pro Leu Cys Asp Leu Leu Ile
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<210> 9

<211> 66

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<222> (1)..(66)

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Cys Pro Glu Glu Lys Gln Arg His Leu Asp Lys Lys Gln Arg Phe His
1 5 10 15

aat ata agg ggt cgg tgg

66

20 Asn Ile Arg Gly Arg Trp
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peptide sequence

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<210> 11

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<212> ADN

<213> Human Papillomavirus

<220>

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<222> (1)..(297)

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Met His Gly Asp Thr Pro Thr Leu His Glu Tyr Met Leu Asp Leu Gln
1 5 10 15

cca gag aca act gat ctc tac tgt tat gag caa tta aat gac agc tca 96

55 Pro Glu Thr Thr Asp Leu Tyr Cys Tyr Glu Gln Leu Asn Asp Ser Ser
20 25 30

gag gag gag gat gaa ata gat ggt cca gct gga caa gca gaa ccg gac 144
Glu Glu Glu Asp Glu Ile Asp Gly Pro Ala Gly Gln Ala Glu Pro Asp

	35	40	45	
5	aga gcc cat tac aat att gta acc ttt tgt tgc aag tgt gac tct acg	192		
	Arg Ala His Tyr Asn Ile Val Thr Phe Cys Cys Lys Cys Asp Ser Thr			
	50 55 60			
10	ctt cgg ttg tgc gta caa agc aca cac gta gac att cgt act ttg gaa	240		
	Leu Arg Leu Cys Val Gln Ser Thr His Val Asp Ile Arg Thr Leu Glu			
	65 70 75 80			
15	gac ctg tta atg ggc aca cta gga att gtg tgc ccc atc tgt tct cag	288		
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20	aaa cca taa	297		
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	<211> 98			
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35	Glu Glu Glu Asp Glu Ile Asp Gly Pro Ala Gly Gln Ala Glu Pro Asp			
	35 40 45			
40	Arg Ala His Tyr Asn Ile Val Thr Phe Cys Cys Lys Cys Asp Ser Thr			
	50 55 60			
45	Leu Arg Leu Cys Val Gln Ser Thr His Val Asp Ile Arg Thr Leu Glu			
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gga gat aca cct aca ttg cat gaa tat atg tta gat ttg caa cca gag 48
 Gly Asp Thr Pro Thr Leu His Glu Tyr Met Leu Asp Leu Gln Pro Glu

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aca act gat ctc tac tgt tat 69
 Thr Thr Asp Leu Tyr Cys Tyr
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10

<210> 14

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Gly Asp Thr Pro Thr Leu His Glu Tyr Met Leu Asp Leu Gln Pro Glu
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Thr Thr Asp Leu Tyr Cys Tyr
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25

<210> 15

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<213> Artificial sequence

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40 <222> (1)..(51)

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caa gca gaa ccg gac aga gcc cat tac aat att gta acc ttt tgt tgc 48
 Gln Ala Glu Pro Asp Arg Ala His Tyr Asn Ile Val Thr Phe Cys Cys

45 1 5 10 15

aag 51
 Lys

50

<210> 16

<211> 17

<212> PRT

<213> Artificial sequence

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 of the sequence coding for E7 of HPV and corresponding
 peptide sequence

<400> 16

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 1 5 10 15

5 Lys

<210> 17

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<213> Artificial sequence

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<222> (1)..(57)

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tct cag aaa

57

Ser Gln Lys

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<210> 18

<211> 19

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35 <213> Artificial sequence

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 peptide sequence

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Ser Gln Lys

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